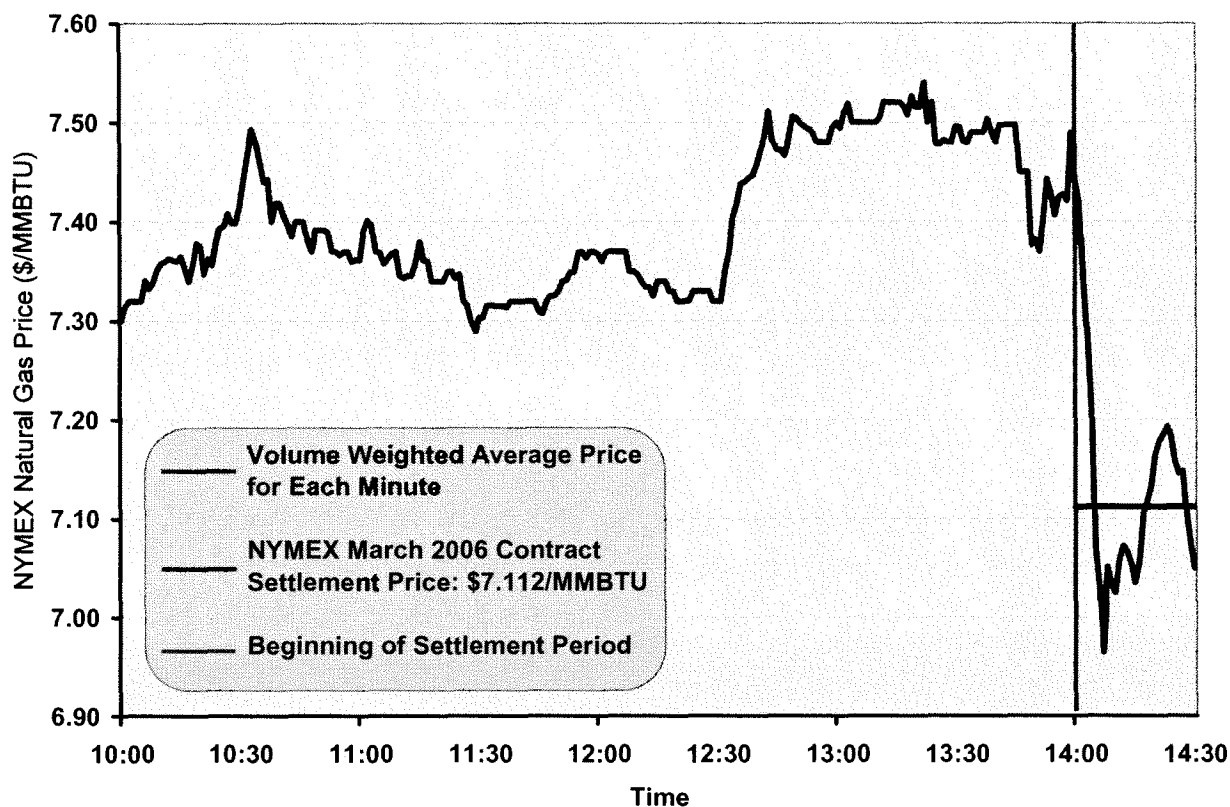


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useful to review the price evolution of these contracts over the course of the termination days. The price points during the three trading days and other relevant information are presented in three figures below.

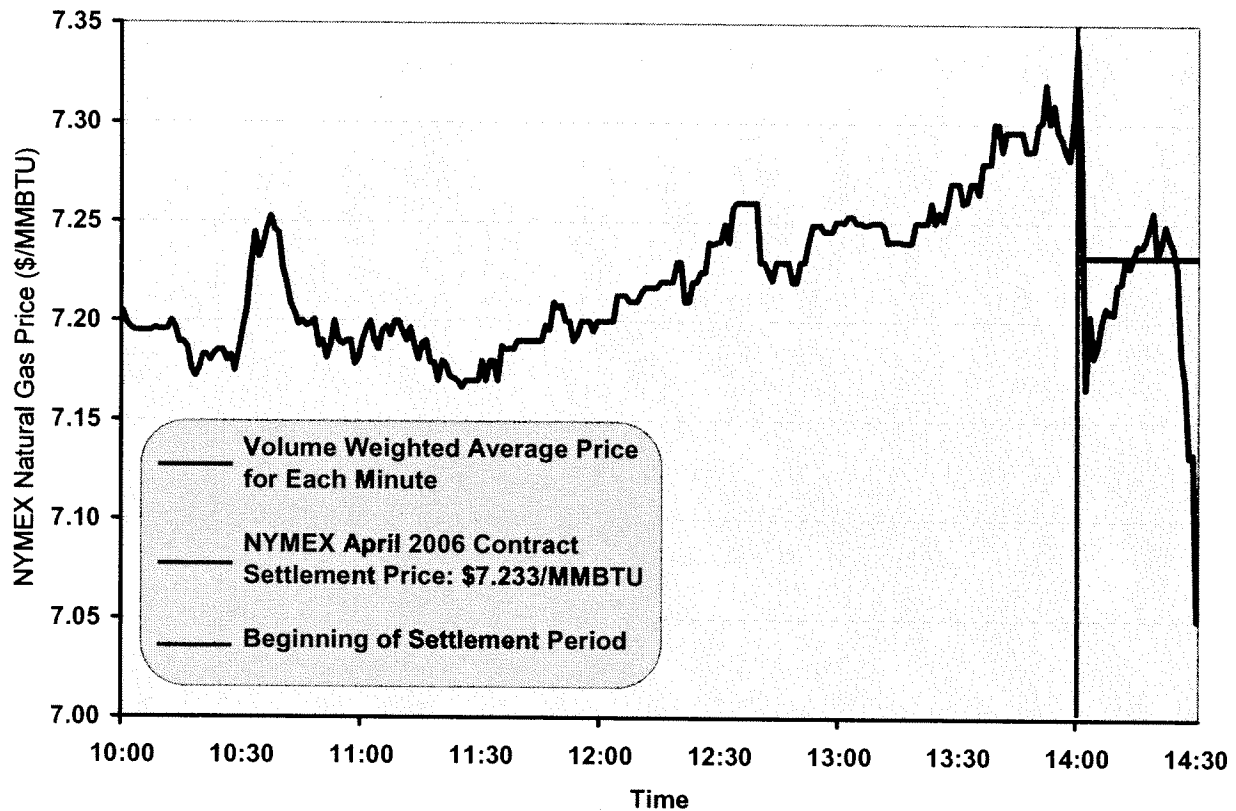
Figure 2: NYMEX Trading on March 2006 Contract Termination, February 24, 2006⁵⁶



⁵⁶ NYMEX_00003 (NYMEX NG Futures Contract trade data).

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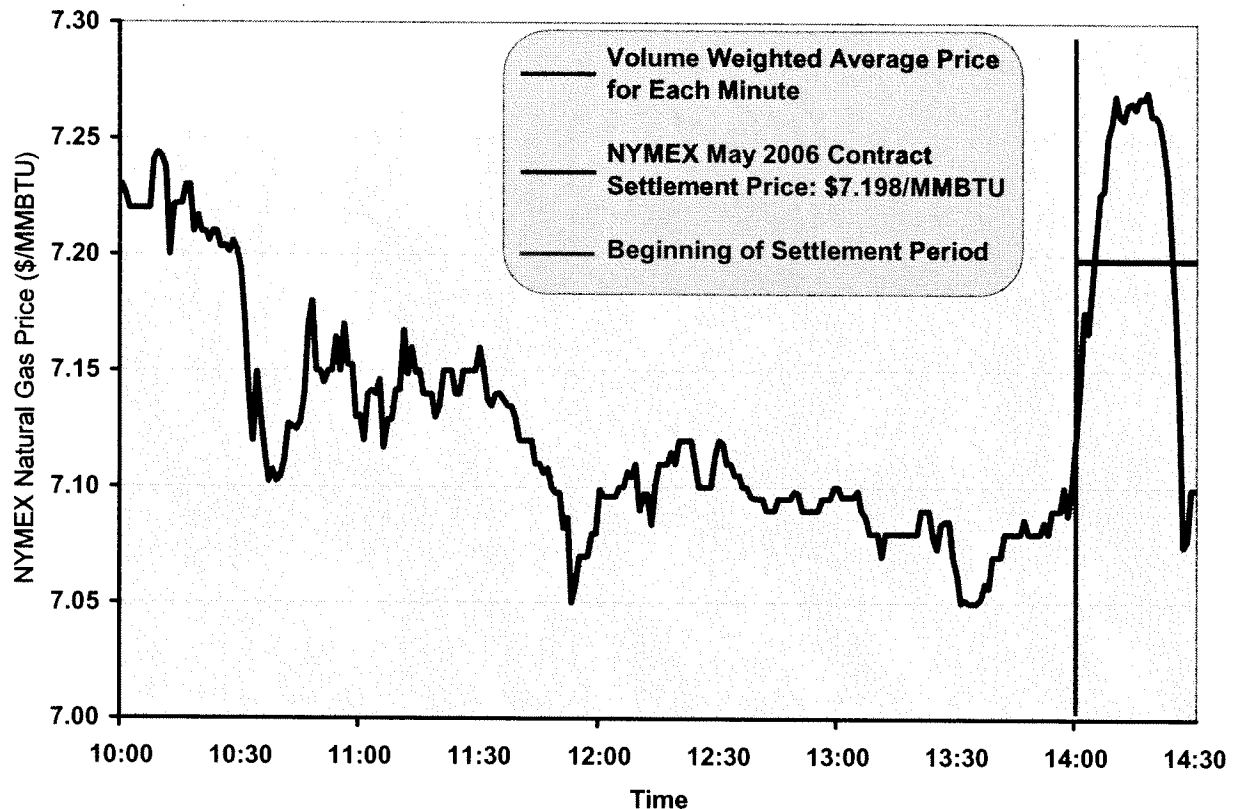
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Figure 3: NYMEX Trading on April 2006 Contract Termination, March 29, 2006⁵⁷

⁵⁷ NYMEX_00004 (NYMEX NG Futures Contract trade data).

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Figure 4: NYMEX Trading on May 2006 Contract Termination, April 26, 2006⁵⁸

42. As these graphs show, there were significant alterations in the trajectory of the prices starting more or less at the start of the settlement period (although the direction and consistency of that change was not always the same). The coincidence of the shift in trajectory with the start of the settlement period and the departure of the settlement period prices from the rest-of-day trading is especially stark for the March contract, for which prices were in the range of \$7.28 to \$7.55 during the day (and closer to \$7.50 in the hours prior to settlement), but then dropped dramatically in the first five minutes of the settlement. The contract settled at just over \$7.11. In addition, the trading in the May contract seems anomalous: a sharp increase in prices at the start of the settlement period was followed by a marked decline.

43. An even more telling view of the activity is the running weighted average of prices which reveals how the volume of each sale combined with the price paid affected what would ultimately become the 30-minute weighted average. For example, Figure 5 below shows for the March 2006 contract (to the left of the vertical red line) the running

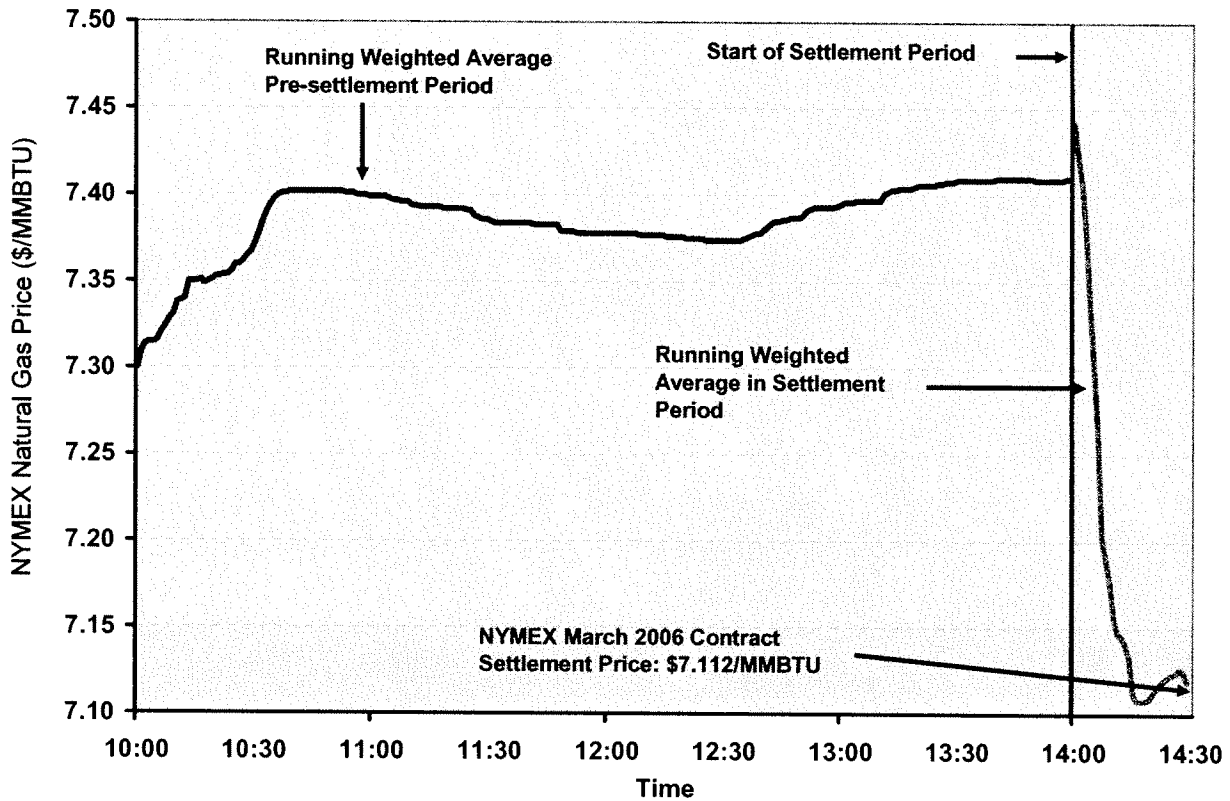
⁵⁸ NYMEX_00001 (NYMEX NG Futures Contract trade data).

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weighted average of prices during the settlement day up to the settlement period. To the right of the red line is a running weighted average of sales in the settlement period. Had a settlement price been calculated based on selling up to the settlement period, the settlement price would have been about \$7.42, but instead the contract settled at \$7.112.

Figure 5: March Contract Volume-Weighted Average Price on February 24⁵⁹



II. The Nature and Scope of the Violations

A. Commission Jurisdiction and the Anti-Manipulation Rule

44. The Commission's Anti-Manipulation Rule, section 1c.1 of the Commission's regulations, implements section 315 of EAct 2005,⁶⁰ and prohibits:

⁵⁹ NYMEX_00003 (NYMEX NG Futures Contract trade data).

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any entity, directly or indirectly, in connection with the purchase or sale of natural gas . . . subject to the jurisdiction of the Commission . . . [from using] . . . any device, scheme, or artifice to defraud [or from engaging in] any act, practice, or course of business that operates or would operate as a fraud or deceit . . . on any person.⁶¹

In adopting this rule, we issued Order No. 670 and therein clarified the following elements of a manipulation claim: “an entity: (1) . . . engages in any act, practice, or course of business that operates or would operate as a fraud or deceit upon any entity; (2) with the requisite *scienter*; (3) in connection with the purchase or sale of natural gas . . . subject to the jurisdiction of the Commission.”⁶² This case presents the first exercise of this new anti-manipulation authority. Accordingly, commentary about some of its elements, as relevant to the facts of this case, is appropriate.

45. The Anti-Manipulation Rule is an intentionally broad proscription against all kinds of deception, manipulation, deceit and fraud.⁶³ In Order No. 670, we explained that fraud is defined generally to include “any action, transaction, or conspiracy for the purpose of impairing, obstructing or defeating a well-functioning market.”⁶⁴ The body of precedent interpreting SEC Rule 10b-5 and section 10(b) of the Exchange Act upon which some of the elements of Rule 1c.1 were modeled makes plain that Rule 1c.1 covers manipulative conduct implemented, as here, by means other than material misrepresentations or omissions. The Supreme Court has defined market manipulation under Rule 10b-5 as conduct “designed to deceive or defraud investors by *controlling or artificially affecting* the price of securities”⁶⁵ or practices that “artificially affect market

⁶⁰ EPLA 2005 § 315 (2005) (codified at 15 U.S.C. 717c-1).

⁶¹ 18 C.F.R. § 1c.1 (2006).

⁶² *Prohibition of Energy Market Manipulation*, Order No. 670, 71 Fed. Reg. 4244 (Jan. 26, 2006), FERC Stats. & Regs. ¶ 31,202, at P 49 (2006) (Order No. 670).

⁶³ Order No. 670, FERC Stats. & Regs. ¶ 31,202 at P 50.

⁶⁴ *Id.* (citing *Dennis v. United States*, 384 U.S. 855, 861 (1966) (noting that fraud within the meaning of a statute need not be confined to the common law definition of fraud: any false statement, misrepresentation or deceit)).

⁶⁵ *Ernst & Ernst v. Hochfelder*, 425 U.S. 185, 199 (1976) (emphasis added).

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activity.”⁶⁶ In particular, practices such as attempting to or actually “marking the close,” by which a manipulator seeks to alter normal market operations by sales targeted at the close of exchange trading, are prohibited.⁶⁷ Just as in the securities markets, energy market participants may be deceived or defrauded where one market participant trades with the intent to artificially affect the price of a physical or financial energy product and has the ability to do so, due to its relative size in the market or through explicit or tacit coordination with other traders. In the presence of such manipulative trading, the price is no longer set solely by the legitimate forces of supply and demand.

46. With respect to the “subject to the jurisdiction of the Commission” element, Section 1(b) of the NGA grants the Commission jurisdiction over “the sale in interstate commerce of natural gas for resale.”⁶⁸ The NGPA⁶⁹ and the Wellhead Decontrol Act of 1989⁷⁰ exclude from the Commission’s NGA jurisdiction all “first sales,”⁷¹ which are all sales from the producer to the consumer, unless and until the gas is purchased by an interstate pipeline, intrastate pipeline, or local distribution company or an affiliate thereof.⁷²

47. As noted *supra*, trading in the NG Futures Contract sets the settlement price for physical gas that “goes to delivery” and also determines the price for physical basis transactions which account for the vast majority of bid week transactions in the East, Upper Midwest and Gulf Coast market centers. These physical basis transactions during bid week, in turn, determine the monthly index prices for these locations and thereby the

⁶⁶ *Santa Fe Indus., Inc. v. Green*, 430 U.S. 462, 476 (1977).

⁶⁷ See *In re Kocherhans*, No. 3-8611, 52 S.E.C. 528, 530, 1995 SEC LEXIS 3308, at *6 (Dec. 6, 1995) (defining manipulation through “marking the close” as “the practice of attempting to influence the closing price of a stock by executing purchase or sale orders at or near the close of the market”); *SEC v. Schiffer*, Fed. Sec. L. Rep. (CCH) P90,247, 1998 U.S. Dist. LEXIS 8579, at *26 & n.26 (Jun. 11, 1998) (finding *prima facie* showing of manipulation through marking the close).

⁶⁸ 15 U.S.C. § 717(b) (2000).

⁶⁹ 15 U.S.C. §§ 3301 *et seq.* (2000).

⁷⁰ Pub. L. No. 101-60, 103 Stat. 157 (1989).

⁷¹ Commodity Exchange Act, 15 U.S.C. § 3431(a) (2000) (CEA).

⁷² 15 U.S.C. § 3301(21)(A) (2000).

prices for the larger volume of sales based on the index price. A substantial proportion of the foregoing are Commission-jurisdictional sales for resale in interstate commerce and not first sales.

48. We do not have jurisdiction directly to regulate trading in the NG Futures Contract that does not affect our jurisdictional markets; that is the province of the Commodity Futures Trading Commission (CFTC). However, the law makes plain that the jurisdiction of the two agencies is to be complementary.⁷³ Where the two regulatory regimes overlap, courts have concluded that Congress intended that both should be given effect. For example, in *United States v. Reliant Energy*,⁷⁴ the court concluded that the Commission's exclusive jurisdiction under the FPA to regulate the transmission and sale at wholesale of electricity in interstate commerce did not preempt the CFTC's anti-manipulation jurisdiction to pursue criminal charges for manipulation of electricity prices during California's energy crisis in summer 2000.⁷⁵ Indeed, Congress directed in EAct 2005 that the two Commissions execute a Memorandum of Understanding (MOU) to establish, among other things, provisions ensuring that investigations pertaining to markets within the respective jurisdiction of each agency are properly coordinated to minimize duplicative information requests, provide for adequate protection of proprietary trading information, and the like.⁷⁶ On October 12, 2005, the Commission and the CFTC

⁷³ CEA, 7 U.S.C. § 2(a)(1)(A) (2000) (providing that CFTC "exclusive" jurisdiction is not to be read to interfere with separate jurisdiction granted to other federal agencies).

⁷⁴ 420 F. Supp. 2d 1043 (N.D. Cal. 2006); *see also SEC v. Hopper*, 2006 U.S. Dist LEXIS 17772, Fed. Sec. L. Rep. (CCH) P93,878 (S.D. Tex. 2006) (court rejected defendants' argument that SEC could not sanction energy trader for "round-trip" trading because such energy trading fell within exclusive jurisdiction of the Commission and the CFTC because the transactions were fraudulent and deceptive within the meaning of Rule 10b-5).

⁷⁵ *Reliant Energy*, 420 F. Supp. 2d at 1045 (*quoting United States v. Borden Co.*, 308 U.S. 188, 198 (1939) ("[I]t is a cardinal principle of construction that ... when there are two acts upon the same subject, the rule is to give effect to both" and "Congressional intent behind one federal statute should not be thwarted by the application of another federal statute if it is possible to give effect to both laws.")).

⁷⁶ EAct 2005 §§ 316, 1281 (codified at 15 U.S.C. §§ 717t-2(c)(1) (2005) and 16 U.S.C. § 824t(c)(1) (2005)).

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entered into the MOU⁷⁷ and pursuant to its provisions, as discussed more fully *infra*, the staffs of the two agencies have worked closely together for more than a year to coordinate discovery and the proceedings in this case. In short, CFTC has jurisdiction over trading on its regulated exchanges, we have jurisdiction over certain types of natural gas and electric markets, and where these markets are interconnected, both agencies have jurisdiction to prohibit market manipulation.

49. In Order No. 670, we interpreted the statutory phrase “any entity” (which is repeated in the Rule) to cover not just companies that have traditionally been subject to Commission jurisdiction (such as natural gas pipeline companies or public utilities), but also to include any company or firm, and natural persons as well⁷⁸ who, “intended to affect, or have acted recklessly to affect, a jurisdictional transaction.”⁷⁹ Thus, while the Commission is not authorized to regulate all commodities trading behavior by any person or company, the Anti-Manipulation Rule prohibits manipulation of the physical and financial natural gas markets by any entity if the manipulative trading, whether intentionally or recklessly, also affects Commission-jurisdictional transactions, such as physical basis transactions and transactions based off indices calculated using physical basis transactions that are not “first sales.”

50. With respect to the *scienter* requirement, in Order No. 670 we stated that for the Anti-Manipulation Rule to apply “the entity must have intended to affect, or have acted recklessly to affect, a jurisdictional transaction.”⁸⁰ With respect to the “in connection with” requirement, Rule 1c.1 applies where there is a “nexus” between the manipulative conduct and the jurisdictional transaction.⁸¹ Given that the application of these elements to any case will almost always be particularly fact-bound, we will discuss the contours of these elements in greater detail *infra*, in the context of the facts of this particular case.

⁷⁷ See Memorandum of Understanding Between the Federal Energy Regulatory Commission (FERC) and the Commodity Futures Trading Commission (CFTC) Regarding Information Sharing and Treatment of Proprietary Trading and Other Information, executed October 12, 2005.

⁷⁸ Order No. 670, FERC Stats. & Regs. ¶ 31,202 at P 2, 18.

⁷⁹ *Id.* at P 22.

⁸⁰ *Id.* (emphasis added).

⁸¹ See *id.* at P 16.

51. The direction in which the manipulative conduct moves the price is immaterial to its legality. Courts routinely find that a downward manipulation violates section 10(b) of the Exchange Act and SEC Rule 10b-5.⁸² In such cases, the conduct is manipulative because it “creat[es] a false impression of supply and demand . . .”⁸³ Courts have emphasized that defendants’ “[f]ailure to disclose that market prices are being artificially depressed operates as a deceit on the market place and is an omission of a material fact.”⁸⁴ Similarly, courts and the CFTC have condemned downward manipulations under the CEA.⁸⁵ The downward manipulation that occurred in *Avista* is of particular relevance to the instant case. There, the CFTC found that Avista Energy engaged in a manipulative scheme to drive down the settlement price of NYMEX electricity futures contracts to increase the value of its positions in over-the-counter (OTC) derivative contracts.⁸⁶ The academic literature takes a similar view, making no distinction between the harms resulting from upward or downward manipulations. These harms may include: deadweight losses due to distortions in consumption, production, storage, and transportation, as well as a reduction in hedging effectiveness, and a decline in market

⁸² See, e.g., *Internet Law Library, Inc. v. Southridge Capital Mgmt., LLC*, 223 F. Supp. 2d 474 (S.D.N.Y. 2002); *Compudyne Corp. v. Shane*, 453 F. Supp. 2d 807 (S.D.N.Y. 2006); *HealthExtras, Inc. v. SG Cowen Secs. Corp.*, 2004 U.S. Dist. LEXIS 698 (S.D.N.Y., Jan. 20, 2004), *United States v. Regan*, 937 F.2d 823 (2d Cir. 1991); *Nanopierce Tech. v. Southridge Capital Mgmt., LLC*, 2002 U.S. Dist. LEXIS 24,049 (S.D.N.Y. Oct. 10, 2002) (*Nanopierce*); *SEC v. Parnes*, 2001 U.S. Dist. LEXIS 21722 (S.D.N.Y. Dec. 26, 2001).

⁸³ *Nanopierce*, 2002 U.S. Dist. LEXIS 24,049, at *30.

⁸⁴ See, e.g., *United States v. Charnay*, 537 F.2d 341, 351 (9th Cir. 1976).

⁸⁵ See, e.g., *Strobl v. New York Mercantile Exch.*, 582 F. Supp. 770 (S.D.N.Y. 1984), *aff'd*, 768 F.2d 22 (2d Cir. 1984) (condemning under the Sherman Act and the Commodity Exchange Act a conspiracy by potato processors to artificially reduce the price of potato futures contracts); *In re Avista Energy, Inc.*, CFTC Docket No. 01-21, 2001 CFTC LEXIS 107 (Aug. 21, 2001) (*Avista*); see also *In re Anthony J. Diplacido*, Comm. Fut. L. Rep. (CCH) ¶ 29,866 (Sept. 14, 2004); *In re Taylor*, Comm. Fut. L. Rep. (CCH) ¶ 29,594 (Sept. 30, 2003).

⁸⁶ *Avista*, 2001 CFTC LEXIS 107, at *5-*6.

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liquidity.⁸⁷ In sum, whenever manipulation results in markets that function other than on the basics of supply and demand, harm to the market participants results.

B. Staff's Investigation

52. Staff of the Office of Enforcement's Division of Energy Market Oversight (DEMO) includes advisors and analysts who have prior experience in the relevant markets, including actual open outcry trading in futures contract pits, as well as transactions in the wholesale physical natural gas markets. DEMO has routinely reviewed NG Futures Contract settlement prices in recent years. During trading for the last half hour of the May 2006 NG Futures Contract on April 26, 2006, DEMO staff observed in real time the sharp rise in price followed by the sharp decline during the last half-hour of trading, which resulted in a 10-cent increase in the settlement price for the May NG Futures Contract compared to where the contract had traded for most the day prior to termination. DEMO then reviewed and conducted a comprehensive comparative analysis of data on prior settlements going back several years. DEMO advised the Commission of its observations and referred the matter to staff of the Office of Enforcement's Division of Investigations (Investigations).

53. On May 2, 2006, Investigations requested from the CFTC, under the Commission's MOU with the CFTC (adopted pursuant to the requirements of EAct 2005⁸⁸), data necessary to identify the entities with the largest positions and trading volume in the May NG Futures Contract. The data showed that Amaranth was, by far, the largest seller in that termination. Subsequently, staff sought a broader data set and, after further analysis, on June 30, 2006, under the authority delegated to the Director of Enforcement or her designee,⁸⁹ the Director of Investigations initiated a non-public, preliminary investigation under Part 1b of the Commission's regulations into suspicious trading in NG Futures Contracts during settlement periods. Staff obtained further data from the NYMEX and the Amaranth Entities were identified as having engaged in seemingly suspicious trading in several contract months in early 2006. Over the ensuing months, Investigations obtained from the Respondents (as well as others) trade and position data, memoranda, reports, e-mails, IMs, and tape recorded telephone

⁸⁷ Stephen Craig Pirrong, *Manipulation of Cash-Settled Futures Contracts*, 74 J. BUS. 221 (2001).

⁸⁸ EAct 2005 § 316 (2005) (codified at 15 U.S.C. 717t-2(c)(1)).

⁸⁹ 18 C.F.R. § 375.314 (2006).

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conversations, as well as the sworn testimony of over fifteen witnesses including all of the identified principals of the Amaranth Entities and each of the individual Respondents.

54. Staff also retained the services of an outside consulting expert Dr. Wincenti (Vince) Kaminski who conducted econometric analyses and a general review of the record which provided an independent review of staff's analysis and, ultimately, gave him a strong basis to conclude that manipulation occurred (see further discussion *infra*).⁹⁰ Based on his academic credentials and professional experience, Dr. Kaminski is a useful and credible source for an opinion on these matters. Dr. Kaminski worked with staff in the following areas: (1) general characterization of the relevant markets; (2) independent (blind) validation of staff's screening for and selection of investigation targets based on trading behavior; (3) review and characterization of the complete Amaranth portfolio, as to possible motives, conduct, intent and benefit from the suspect trading activity; (4) review of the evidence and testimony gathered, and (5) understanding the dynamics of trading in the NYMEX pit during the settlement period and how the behavior of one or a small group of traders can influence the rest of the market. He also conducted market share, concentration, multiple regression, and other econometric analyses in order to assess Amaranth's ability to impact, and estimate its actual impact on, the settlement price.

55. Staff's investigation was heavily coordinated with an investigation opened subsequently by the CFTC, the exclusive direct regulator of the NYMEX. As contemplated by the MOU, the staffs of the two agencies regularly coordinated their discovery efforts including participating jointly in depositions, sharing documentary evidence and conferring jointly with both inside and outside experts. Staff also coordinated with the Securities and Exchange Commission and other government agencies who have examined various regulatory aspects of Amaranth's activities. Coordination of this sort of case is, we believe, what Congress intended given the increasing interrelationship between the physical and financial energy markets. CFTC has exclusive jurisdiction over the operation of exchanges such as NYMEX, we have

⁹⁰ Dr. Kaminski is a world renowned expert in the field of energy trading and applied mathematics and economics. His more recent publications include *ENERGY MODELING: ADVANCES IN THE MANAGEMENT OF UNCERTAINTY* (2005) and *MANAGING ENERGY PRICE RISK: THE NEW CHALLENGES AND SOLUTIONS* (2004). He is currently on the faculty of the business school at Rice University. Prior to that, he spent a career in various energy trading operations leading sophisticated quantitative analysis teams, and he recently was consulted by a Congressional committee as to the functioning of the natural gas markets and testified before the Senate Committee on Homeland Security and Governmental Affairs Permanent Subcommittee on Investigations on June 25, 2007.

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exclusive jurisdiction over the physical wholesale gas markets described above, and both agencies have jurisdiction where, as here, the manipulations are connected to both markets.

56. Each of the Respondents, prior to the issuance of this Order, was notified of Staff's conclusions that form the basis for this Order and were given multiple opportunities to address those conclusions, in writing and otherwise.

C. Amaranth's Manipulation of the March, April, and May 2006 NG Futures Contracts on February 24, March 29, and April 26, 2006

57. We preliminarily find that Amaranth's head natural gas trader, Hunter, along with his execution trader, Donohoe, manipulated the settlement price of the NG Futures Contract for the March 2006, April 2006, and May 2006 contracts, by holding the Amaranth Entities' NG Futures Contract positions open until the beginning of the settlement periods on February 24, March 29, and April 26, 2006, then liquidating the positions by selling during the settlement period. The traders sought to influence the settlement price in order to benefit their positions in financially-settled swaps and options.

58. Before embarking on the discussion of Amaranth's trading, it is important to emphasize that the Commission does not consider high volume trading during the settlement period alone to be illegal or manipulative. Nor is it illegal to possess a large share of trading activity, to engage in speculation, or to wrongly predict the direction of markets. However, where a firm uses some combination of market power and trading activity, against economic interest in one sector, in order to benefit its position in a related financial instrument by artificially moving the price, the firm likely crosses the line into the realm of manipulation. Our preliminary conclusion here is based on all of the facts and circumstances of the case, including, as discussed more fully below: the fact that Amaranth traded in a manner that had the effect of driving down the NG Futures Contract settlement price; its aggregate natural gas position in the prompt month and prompt next; the manner and timing of the building of these positions in the days leading up to the settlement periods; and, contemporaneous documents in which Hunter and Donohoe outlined their plan to trade in the settlement period and the strong circumstantial evidence as to motive and intent that can be drawn from the sequence, pinpoint timing, and language of these documents.⁹¹

⁹¹ See Order No. 670, FERC Stats. & Regs. ¶ 31,202 at P 50 ("Fraud is a question of fact that is to be determined by all the circumstances of a case."); *Herman & MacLean v. Huddleston*, 459 U.S. 375, 391 n.30 (1983) ("The Court of Appeals also noted that the
(continued)

59. Nevertheless, high-volume trading during the settlement period is one factor (among many) that lead us to conclude that Amaranth had a manipulative intent for trading during the settlement periods identified above. Most traders normally try to avoid trading in large volumes during this period due to a number of risks. First, liquidity (*i.e.*, the amount of “open interest”) is diminishing rapidly as most traders close out their positions well in advance of the termination day, and in particular the final thirty minutes. There are only a limited number of futures market participants that are also active in the physical markets and thus have the ability to make or take physical delivery. For a purely financial player (such as Amaranth), the risks of failing to close out the position are thus magnified, when compared with those faced by physical players.

60. Moreover, errors in monitoring the position in the prompt-month NG Futures Contract can result in unwanted physical delivery obligations, so traders want to be “out” well before the close to allow time for confirmation and reconciliation of trade capture systems so that any errors can be corrected if necessary before the close of trading.⁹² The spread between bids and offers (*i.e.*, difference between the price sellers are asking for and the price that buyers are willing to pay at a given moment) as well as the spreads (*i.e.*, difference) between the prompt-month NG Futures Contract and a later-month NG Futures Contract or related instruments such as swaps or an “exchange of futures for

proof of scienter required in fraud cases is often a matter of inference from circumstantial evidence. If anything, the difficulty of proving the defendant's state of mind supports a lower standard of proof. In any event, we have noted elsewhere that circumstantial evidence can be more than sufficient.”); *see also TSC Indus., Inc. v. Northway, Inc.*, 426 U.S. 438, 463 & n. 24 (1976) (stating that a showing of market manipulation “may be by circumstantial as well as direct evidence, and the purchases themselves may be considered”).

⁹² In fact, in the Autumn of 2005 Amaranth made a significant error of this sort, which obligated it to take delivery of 100 to 200 contracts. After this costly error, Amaranth required all traders to transfer their position in the prompt-month NG Futures Contract to a single trader (Donohoe) during the days immediately preceding the settlement day, and Donohoe was responsible for exiting these positions. Hunter Dep. 51:15-52:10 (June 15, 2007); Donohoe Dep. 44:17-47:13 (Mar. 14, 2007 morning session); Arora Dep. 29:19-30:24 (Nov. 14, 2006 afternoon session); Carrieri Dep. 31:9-32:7 (May 15, 2007). As will be discussed below, this concentration of the prompt-month NG Futures Contract position in the hands of one trader on the termination day facilitated the manipulation.

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swaps” (EFS) can be substantial and highly volatile during the settlement period. As Arora testified:

[A]s you get closer expect more volatility and liquidity is usually more difficult. Or things get more volatile and the liquidity profiles change. You have lesser time. . . . As I mentioned to you, that is taking your contract too -- taking your position . . . which you do not intend to take or make delivery too close out there and be exposed to the last minute changes to spreads.⁹³

61. Concentrated buying or selling in the settlement period could move prices up or down, respectively, either as a result of: (i) the sheer volume of contracts traded, conferring a transitory, but nevertheless meaningful “market power;” (ii) unilateral manipulative floor trading practices (*e.g.*, instructing or positioning the floor broker to signal to other floor brokers the plan so as to boost the market-moving effect); or (iii) explicit or tacit collusion (*e.g.*, with other traders who recognize the manipulator’s intent and want to help him move the market with tag-along benefits to their own positions). In any case, for such a strategy to have a significant impact on the settlement price, which is a volume-weighted average, a would-be manipulator would have to account for, or propagate, a significant portion of the trading volume during some portion of the settlement period and the market would have to be fairly concentrated for some portion of the settlement period.

62. If trading in the NG Futures Contract were considered in isolation, the above manipulative strategy would typically be self-defeating. Concentrated selling of the NG Futures Contract to liquidate a long position (or buying to liquidate a short position) would normally reduce the value received, so that the overall payoff would always be less than that from a non-manipulative, price-taking strategy. However, such a strategy could be profitable to a trader who has set up its portfolio with *opposing* swap or physical positions that are much greater in scale (highly leveraged) than the NG Futures Contract position so as to benefit from these otherwise adverse movements in the NG Futures Contract. We preliminarily find that this is the calculation and strategy the Respondents employed.

⁹³ Arora Dep. 44:16-19, 45:21-24 (Nov. 14, 2006 afternoon session); *see also* Lee Dep. 57:23-58:12 (Mar. 21, 2007 morning session) (discussing heightened volatility and other dangers of trading during close); Bolling Dep. 76:4-24 (June 29, 2007) (same).

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1. Trading on February 24, 2006: *“Bit of An Experiment Mainly”*

63. The evidence of Amaranth’s manipulation is clearest with respect to its trading on February 24, 2006, relating to the settlement of the March 2006 NG Futures Contract. Notably, this was the first time that the firm traded more than a few hundred contracts in any settlement day and the first time it traded a large number of contracts in the 30-minute settlement period. At roughly 10:00 a.m. on that day, Amaranth’s Greenwich headquarters advised Hunter and Donohoe in an e-mail that they were short (1,729) futures contracts and to make sure that Amaranth is “flat by the end of the day today.”⁹⁴ In other words, Greenwich gave the unremarkable reminder to Calgary that the position should go to zero so as to avoid taking delivery. But Hunter and Donohoe had plans to do much more before going “flat by the end of the day.”

a. The Instant Messages

64. In this case, our inquiry is aided by the fact that Hunter and Donohoe were physically separated by half a continent in February 2006. Hunter was in Calgary, and Donohoe was in Greenwich. They chose to use instant messaging technology to communicate and effectuate their trading. Buried in the millions of bytes of instant message texts uncovered by staff are the clear signals of their manipulative scheme. In particular, in a series of instant messages from a 24-hour period in late February 2006 with other Amaranth traders (such as Donohoe and Calhoun) and traders at other firms (such as one Bart Glover of National Trading LLC with the IM handle “gloverb”), Hunter laid out his plan to manipulate the settlement price for the March NG Futures Contract by selling over 3,000 contracts “MoC” (market on close). “Market on Close” means to sell during the settlement period, or as one definition puts it “[a]n order to buy or sell at the end of the trading session at a price within the closing range of prices.”⁹⁵

65. The first hints of this strategy are contained in two instant message conversations between Hunter and Donohoe on February 23, the day before the termination day. First,

⁹⁴ AALLC_REG0672597 (February 24, 2006 E-mail from Michael Malach to Hunter and Donohoe, among others).

⁹⁵ CFTC Glossary, http://www.cftc.gov/opa/glossary/opaglossary_m.htm; *see also* definition used by Man Financial, one of the leading brokers at NYMEX, http://www.mandirect.com/Trading-Tools/order_entry.cfm (stating that a “Market on Close” order is “an instruction to fill the order, at market, but only in the closing range”).

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at 2:58 p.m., Hunter tells Donohoe “ok – end of day tomorrow still stands.”⁹⁶ The meaning of this cryptic comment is apparently clarified at 3:39 p.m., when Hunter instructs Donohoe to “make sure we have lots of futures to sell MoC tomorrow.”⁹⁷ Hunter thus instructed Donohoe to buy a large number of March NG Futures Contracts before the close the next day so that Amaranth would have “lots” of NG Futures Contracts to sell MoC, that is, during the close. At the time Hunter made the statement, Amaranth had a short position of (1,729) March NG Futures Contracts.⁹⁸ Therefore, Amaranth would have had to buy only 1,729 March NG Futures Contracts if its objective was merely to go “flat by the end of the day today.” But, if it wanted to have “lots” of futures *to sell MoC*, it would have to buy *additional* contracts to build a long position. That is what it did. In fact, Amaranth bought in excess of 4,800 March NG Futures Contracts the next day, taking its position from short, past “flat” and then to long sometime around noon.

66. In a series of instant message exchanges during the mid-day of February 24, Donohoe gave Hunter periodic updates on his position in the March NG Futures Contract, and Hunter provided further detailed instructions on the implementation of their strategy. For example, in an instant message conversation beginning at 11:02 a.m. EST, Donohoe informed Hunter that he had already liquidated the short position of (1,729) March NG Futures Contracts and was by that point up to a long position of 2,111. Hunter then instructed Donohoe to further build his position to be long at least 3,000 contracts.⁹⁹ By 12:22 p.m., Donohoe had already achieved this goal, reaching a position

⁹⁶ AALLC_REG0684033. Given that the Hunter and Donohoe were in Calgary and Greenwich, respectively, and that this is the first mention of trading for the “end of the day tomorrow” in the instant messages, it appears that Hunter first laid out his strategy to Donohoe in a previous telephone conversation. Amaranth claims that it did not record any of its telephone lines, so we do not have any record of any telephone conversations laying out their plan.

⁹⁷ AALLC_REG0684056 (February 23, 2006 Instant Message between Hunter and Donohoe).

⁹⁸ AMARANTH_REG091722_pos0223.xls (Amaranth end of day position report for February 23, 2006); AALLC_REG0672597 (February 24, 2006 E-mail from Michael Malach to Hunter and Donohoe, among others).

⁹⁹ AALLC_REG0704803.

Donohoe: 11:02:52 i'm long 2111 fut

Hunter: 11:03:20 already?

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of long “3111 fut,” *i.e.*, March NG Futures Contracts. Donohoe then asked whether he should get more but Hunter told Donohoe that “that should be enough.”¹⁰⁰ Donohoe agreed not to trade any more March NG Futures Contracts until the settlement period, so that he could carry out Hunter’s previous instruction that all of these contracts were to be sold in the close.¹⁰¹

67. In the meantime, Hunter let Donohoe know he was “telling vinnie.”¹⁰² This is a reference to Hunter contacting Amaranth’s primary NYMEX floor brokerage firm, ALX Energy, Inc. (ALX), and specifically Vincent Rufa, one of ALX’s phone clerks.¹⁰³ Under all the circumstances, a fair inference is that Hunter called Rufa in order to advise him of Amaranth’s intentions so that when it came time to execute the trades, the broker would have considered, in advance, how to execute the order so as to maximize the intended effect.¹⁰⁴ We note that because Rufa had a strong professional and personal relationship

Donohoe: 11:03:43 vitol sold 2000

Hunter: 11:04:12 maybe get to 3000

Donohoe: 11:04:17 I can easily get 2000 or mor

¹⁰⁰ AALLC_REG0684197.

¹⁰¹ *Id.*

Donohoe: 12:22:03 3111 fut

Hunter: 12:26:17 that should be enough

Hunter: 12:26:23 getting them easy?

Donohoe: 12:26:35 yeah ... last 1500 on h/j roll

Donohoe: 12:26:42 vitol gave me 2000

Hunter : 12:32:20 telling Vinnie

Donohoe: 12:32:52 ok no more futures will be traded

¹⁰² *Id.*

¹⁰³ Rufa also traded for his own account and acted as a broker during the relevant time period. Rufa Dep. 19:19-23, 21:23-22:4 (Mar. 7, 2007).

¹⁰⁴ This inference is further justified by Rufa’s testimony indicating that he owed a certain loyalty to Amaranth – that he communicated conditions in the pit directly to either Hunter or Donohoe, and that he did so all day long. Rufa Dep. 28:10-29:14, 51:2-12 (Mar. 7, 2007). Said Rufa, “I would make sure the clients got information I thought they needed.” Rufa Dep. 22:5-7. Rufa has also passed on critical market intelligence to market participants in the past, such as the identity of a buyer or seller. Hunter Dep. at 169:3-21 (June 15, 2007).

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with Amaranth and its traders, and because of subsequent events, as discussed more fully *infra*, it is reasonable to conclude that Amaranth armed Rufa with the knowledge that Amaranth intended to drive down prices in the close.¹⁰⁵

68. It appears that ALX's resulting selling activity, in one manner or another, disseminated to the pit that Amaranth would be a large seller. During the settlement period, an ALX floor broker, James DeLucia, known in the pit as Jim X, traded on Amaranth's behalf. Another trader, Eric T. Bolling stood only five feet away from DeLucia in the pit.¹⁰⁶ Of the trades that DeLucia executed on behalf of Amaranth during the close, approximately 26 percent went to Bolling, more than any other trader transacted with Amaranth.¹⁰⁷ Bolling was thus an eyewitness to the Amaranth selling and recalled in vivid detail the events of that settlement. He testified that the March contract close on February 24 involved a "dramatic sell off . . . [that was] probably more emphatic [than a typical close because of] the speed at which it dropped, 50 cents."¹⁰⁸

69. Bolling was able to trade profitably in rapid fire fashion because of what Bolling called "massive"¹⁰⁹ selling by DeLucia, suggesting that, at the very least, DeLucia did not achieve best execution. Bolling testified that it was clear to him that DeLucia had a lot of size to move, and he was more concerned with executing trades than with obtaining good prices. Bolling further testified that the pit, himself included, knew that Amaranth traded through ALX.¹¹⁰ Armed with the right information a floor broker can use pit behavior, some of which is virtually undetectable, to reveal – even unwittingly – to other floor brokers how he intends to trade.¹¹¹ Traders watch the pit to see how it is reacting and moving; as Bolling testified, "That is the way a pit trader should trade You look for

¹⁰⁵ Amaranth was ALX's largest customer, and Rufa traveled to Calgary and socialized with Amaranth employees on multiple occasions. Rufa Dep. 42:23-47:2, 48:23-49:3 (Mar. 7, 2007).

¹⁰⁶ DeLucia Dep. 96:4-97:11 (May 17, 2007).

¹⁰⁷ NYMEX_00003 (NYMEX NG Futures Contract trade data).

¹⁰⁸ Bolling Dep. 168:3-5, 169:13-16 (June 29, 2007).

¹⁰⁹ *Id.* at 212:12-17.

¹¹⁰ *Id.* at 54:22-23.

¹¹¹ There are many ways a broker can communicate whether he is a big buyer or seller. For example, a floor trader can make trades with an apparent indifference to price.

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volume, you look for flow, you want to see activity, you want to see traders or orders that have big volume or they are aggressive”¹¹² and “you have to adjust your trading according to the direction of the market, the direction of the order flow”¹¹³ and “[t]hat is part of the nuance of being a pit trader is to be able to read people, read where they are, not just order brokers, but locals, too.”¹¹⁴ Moreover, a single trader can move the market by “continually adding to the trade. In other words, when you get filled, do it again, do it again, do it again, and there are orders like that. There are people who just come back and come back and come back.”¹¹⁵ As discussed more fully *infra*, Bolling confirmed this is what Amaranth’s broker did and that the selling indeed moved the market.

70. Additional evidence of *Amaranth’s* intent, further paints the picture of a plan to drive down the settlement price. As the Amaranth traders waited for the settlement, Hunter traded messages with Matthew Calhoun, another Amaranth natural gas trader, in which Hunter boasts he “just need[s] *H to get smashed on settle* ... then day is done.”¹¹⁶ The letter “H” is the market nomenclature for the March NG Futures Contract. In another message at 1:31 p.m., Hunter outlined his plans to Glover:

Hunter: We have 4000 to sell MoC . . . *shhhh*

Glover: unless you are huge bearish . . . why the f would yo [sic] do that

Hunter: *bit of an expiriment [sic] mainly*

Glover: what the f . . . *that is huge*¹¹⁷

71. Donohoe carried out Hunter’s instructions by placing a series of six orders to ALX from 2:00 p.m. to 2:28 p.m., in which he directs ALX to sell a total of 3,111 NG Futures Contracts.¹¹⁸ Technically, Donohoe did not place an “MoC” order, but instead placed a

¹¹² Bolling Dep. 48:16-25 (June 29, 2007).

¹¹³ *Id.* at 80:7-9.

¹¹⁴ *Id.* at 90:20-22.

¹¹⁵ *Id.* at 128:11-14.

¹¹⁶ AALLC_REG0684186 (emphasis added).

¹¹⁷ AALLC_REG0684227 (emphasis added). In an earlier instant message, Hunter tells gloverb at 11:13 a.m. that “its us and john [Arnold of rival trading house Centaurus]... we are long ...futures ... for MoC ... decent size.” AALLC_REG0684152.

¹¹⁸ ALX006-011. Each of the first five was for 500 March NG Futures Contracts, with the last at 2:28 p.m. for 611 March NG Futures Contracts.

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series of “Market Orders” in the close.¹¹⁹ An MoC order would have directed the broker to sell the contract in the closing range but would have left the timing of the sales to the discretion of the broker in order to get the best price, so long as the sales occurred in the closing range. A “market order” is an order to buy or sell a futures contract immediately at whatever price is obtainable at the time it is entered in the pit.¹²⁰ On all the floor trading tickets created in the pit by ALX when Amaranth phoned in its orders, the price column is left blank, indicating that Hunter was indifferent to the price received for these contracts, as long as they sold.¹²¹ Importantly, the first trade tickets, time stamped at 1:59 p.m., indicate an order to sell 500 contracts, which represents by far the largest sell in the opening minutes of the close. And, the notes on the ticket pertaining to executions in the pit known as “fills” show relatively higher priced transactions occurring rapidly in small lot sizes accompanied by the rapid drop in prevailing prices as seen in Figure 2 above. Once the prevailing market price dropped from around \$7.40 at 2:00 p.m. to about \$7.10 sometime around 2:08 p.m., Amaranth fills show rapid and larger size fills at the lower prices. This activity strongly supports the profile of a large seller signaling to the pit the intention to be a large seller and inducing buyers to hold off on aggressive bidding, waiting instead for progressively lower offers (and thus lower prices for their buys).

72. Bolling specifically recalled,

Jim X [ALX’s DeLucia] was a big seller in March [the March contract] I mean, just hitting any substantial bid that was there, hitting a bid, if you showed him a bid he would hit it. He clearly had a lot of contracts to sell . . . he is hitting me every time I open my mouth, and I am the biggest local in the ring.¹²²

Nor was Bolling the only trader reacting to ALX:

A: [A]ll eyes were on Jim X because he had a lot to sell. He had a lot of contracts to sell, and if you put a big bid up he would hit it.

¹¹⁹ *Id.*

¹²⁰ CFTC Glossary, http://www.cftc.gov/opa/glossary/opaglossary_m.htm.

¹²¹ ALX006-011.

¹²² Bolling Dep. 172:18-22, 175:22-23 (June 29, 2007).

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Q: Aside from you, who else was watching Jim X?

A: I think the whole pit was [H]e was willing to hit any bid that was . . . any size bid in the ring, boom, sold, boom.”¹²³

* * *

Q Did it seem to you that he was more interested in price or volume?

A: Volume.¹²⁴

* * *

A: Remember, it is a close and most of the smaller market makers are going to back off because they don't want to get hit by a freight train

Q: You would describe Jim X's selling as a freight train?

A: On a close, on a very active close in March, with March-April being such an active spread, I would say that if he kept hitting 100's that would be a freight train, yes.

Q: Did he keep hitting 100's?

A: He hit me on it a bunch of times.¹²⁵

* * *

He was a massive seller.¹²⁶

¹²³ *Id.* at 178:18-179:6.

¹²⁴ *Id.* at 180:25-181:2.

¹²⁵ *Id.* at 209:19-210:6.

¹²⁶ *Id.* at 212:17.

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73. In response to Amaranth's "freight train" of a broker, the pit reacted to move the market lower. Bolling further testified:

Q: And in the first instance you would expect that the price would go lower if he were truly bailing?

A: Yes.

Q: And would everyone else who is prepared to feed on the bad –

A: Now you are barking up the right tree.

...

Q: -- prepared to feed on the fallen corpse, would they run ahead of this to help the market go lower?

A: Absolutely.¹²⁷

* * *

A: If all of a sudden he is selling a big piece of March on the close, for me as a trader, the flag goes up and says, hey, maybe this is the beginning of him saying, no mas, and he is throwing the position in, at which point all of his upstairs buddies, who are either on the other side of the trade or looking to make a buck off it, guarantee started selling. I mean that is what happened.¹²⁸

74. Bolling was a prominent force in the pit that other traders followed or watched for direction.¹²⁹ By arming Bolling and other significant locals with knowledge and the opportunity to trade Amaranth contracts virtually risk free, DeLucia further magnified the effect of Amaranth's trading activity. Such a signal would have allowed the other floor brokers to position themselves to respond to the selling broker in such a way that could

¹²⁷ *Id.* at 193:1-11.

¹²⁸ *Id.* at 193:24-194:5.

¹²⁹ DeLucia Dep. 77:13-78:13 (May 17, 2007); Bolling Dep. 90:23-91:4 (June 29, 2007).

have benefited them (for their own or client accounts) as well as maximize the intended market effect of the selling broker's trades.

75. As the settlement period progressed, at 2:15 p.m. Hunter and Donohoe began engaging in a bit of celebratory instant messaging:

Hunter: today came together quite nicely . . . We'll hit the rest near the end of this

Around 2:30 p.m., as the settlement period ended:

Donohoe: h [March NG Futures Contract] will settle lower . . . and h/j [March April spread] wider . . . nice . . .

Hunter: I am flexing here

Donohoe: looking preety bang on . . . lol . . . rrrrrrrrrrrrrrrrrrr

Hunter: hahahahaha

Donohoe: 2nd best ... sept/oct last year still the best¹³⁰

This last reference indicates Donohoe's expectation that the day would be their second best ever – the best still being the hurricane-related trading from the fall of 2005. Unlike in Autumn 2005, however, there were no major disruptions to the supply and demand sides of the physical gas markets – as occurred in the wake of Hurricanes Katrina and Rita – that would explain the trading profits that Amaranth earned on February 24.

b. Trade and Position Data

76. Forensic evaluation of Amaranth's trade data confirms the intentions and conduct suggested by the IMs. Amaranth entered the day with a short position of (1,729) March NG Futures Contracts.¹³¹ Amaranth bought between 4,800 and 4,900 contracts prior to the close on February 24. Amaranth began selling at roughly 2:00 p.m., which is the beginning of the settlement period, and sold 3,111 contracts in the settlement period. Amaranth was the largest seller in the close and its selling represented at times between forty and fifty percent of all sales in the opening minutes of the close. The following Figure 6 shows the trades throughout the day, with the blue bars representing buys (to a

130 AALLC REG0704932.

¹³¹ AMARANTH_REG091722_pos0223.xls (Amaranth end of day position report for February 23, 2006); AALLC_REG0672597 (February 24, 2006 E-mail from Michael Malach to Hunter and Donohoe, among others).